

7-2015

Evaluating Library Spaces while Developing a 'Culture Of Assessment'

Gulcin CRIBB

Singapore Management University, cribb.gulcin@gmail.com

Tamera HANKEN

Singapore Management University, tamerahanken@smu.edu.sg

Swapna GOTTIPATI

Singapore Management University, SWAPNAG@smu.edu.sg

Follow this and additional works at: https://ink.library.smu.edu.sg/library_research

Part of the [Asian Studies Commons](#), and the [Library and Information Science Commons](#)

Citation

CRIBB, Gulcin; HANKEN, Tamera; and GOTTIPATI, Swapna. Evaluating Library Spaces while Developing a 'Culture Of Assessment'. (2015). *Northumbria International Conference on Performance Measurement in Libraries and Information Services, 20-22 July 2015*. Research Collection Library.

Available at: https://ink.library.smu.edu.sg/library_research/S7

This Presentation is brought to you for free and open access by the SMU Libraries at Institutional Knowledge at Singapore Management University. It has been accepted for inclusion in Research Collection Library by an authorized administrator of Institutional Knowledge at Singapore Management University. For more information, please email libIR@smu.edu.sg.

EVALUATING LIBRARY SPACES WHILE DEVELOPING A 'CULTURE OF ASSESSMENT'

11th Northumbria International Conference on Performance
Measurement in Libraries and Information Services
July 20-22, 2015

Gulcin Cribb, University Librarian

Tamera Hanken, Head, Information Access & Resources

Swapna Gottipati, Assistant Professor, School of Information Systems

Agenda

- SMU & SMU Libraries
- Background
 - Culture of Assessment Initiative
 - Learning Spaces Initiative
- Purpose, Design & Methodology
- Findings & Outcomes
- Discussion & Going Forward

Singapore Management University (SMU)

- A young university – opened in 2000
- 6 Schools – Business, Economics, Accounting, Information Systems, Law, Social Sciences and many research centres
- City Campus - 7 buildings at the heart of Singapore
- 9000 students (8000 ug and 1000 pg), 350 faculty
- Broad based education, small classes, project based learning, blended learning

SMU Libraries

Li Ka Shing Library (Opened in 2005)



Kwa Geok Choo Library (Opening in 2017)



SMU Libraries

- Li Ka Shing Library
 - 8,000 sqm, 1,800+ seats
 - 39 staff – 22 professional librarians
 - 300,000 books (250,000 e-books); 80,000 e-journals
 - 1 million visitors annually since 2012
 - Renovations to learning spaces completed in 2014

Our 'Drivers of Change'

Drivers

- Changing role of librarians
- Strategic emphasis on blended learning, project based learning, student-centered learning
- Evolving relationship between pedagogy and use of learning spaces

Assumptions

Heterogeneous student population; space use preferences differ widely amongst students depending on:

- *Personal learning styles*
- *Pedagogy*
- *Courses (project based or not)*
- *Phase or stage of the academic term*
- *Perceptions of the 'good student'*

To every thing there is a season, and a time to every purpose under the heaven...

Culture of Assessment @ SMU Libraries

- Campus Operational Excellence Initiative
 - Office of Business Improvement established in 2012
 - Lean Six Sigma Green Belt Training
- Libraries' involvement with Lean Six Sigma began in 2013
 - Learning outcomes:
 - Alignment of improvement efforts with strategic goals
 - Strengthen management competencies
 - Continuous assessment & improvement
 - User focused services
 - Evidenced based decision making
 - Identifying and demonstrating value

Space planning

- Master planning exercise began in 2012
- Funding for staged renovation approved in 2013
- Opportunity to reinforce and practice methods & principles as learned in the Lean Six Sigma Green Belt training



Master Planning 101 – HASSELL

(An introduction to space planning & applied research)



2. Student Workshops

_Activity Mapping / Menu of Settings

ACTIVITY MAPPING...

UNDERSTANDING THE WAYS THAT YOU USE THE LIBRARY NOW, & EXPLORING HOW YOU WOULD LIKE TO USE THE LIBRARY IN THE FUTURE THROUGH ARRANGING THE RELEVANT ACTIVITIES ACCORDING TO THE DEGREE OF IMPORTANCE AND FREQUENCY.

MENU OF SETTINGS...

CONSIDERING WHAT YOUR IDEAL RANGE OF SETTINGS WOULD BE FOR REFLECTIVE SPACES (INDIVIDUAL), INTERACTIVE SPACES (GROUP) & CREATIVE SPACES EXPLORING THE PHYSICAL SETTINGS WITHIN THE LIBRARY ENVIRONMENT AND THEIR CO-LOCATIONS



HASSELL



_Metaphorically Speaking

OVERVIEW

ASK THE QUESTION 'WHAT SHOULD IT FEEL LIKE TO USE THE LIBRARY IN THE FUTURE' & WHY? THINK ABOUT THE SETTING TYPE (WRITE THESE DOWN FOR THE ACTIVITY MAPPING SESSION). PARTICIPANTS SELECT VISUAL IMAGES THAT REPRESENT THEIR THOUGHTS AND BELIEFS ON A TOPIC THAT MAY BE DIFFICULT TO ARTICULATE IN WORDS.



How will you use the library in the future through arranging the relevant activities according to the degree of importance and frequency...

Master Planning 101 – HASSELL

(An introduction to space planning & applied research)

- Voice of the Customer

- Activity mapping
 - Importance/Frequency matrix
- Space characteristics
 - Interactive, Creative, Reflective
- Future planning
- Observational studies
- Focus Groups
- Interviews
- Surveys (LibQual, SMUSA)



2012 Student Association Survey

Library renovations completed, 2014

- Investment Centre
- Two Learning Labs
- Additional Graduate Suite
- **24/7 Learning Commons**
 - Individual carrels, group study tables, café style seating
 - Two sharable technology enabled project rooms
 - Two 'phone booths'
 - The 'Hive'- a flexible learning space to accommodate collaborative, project based learning



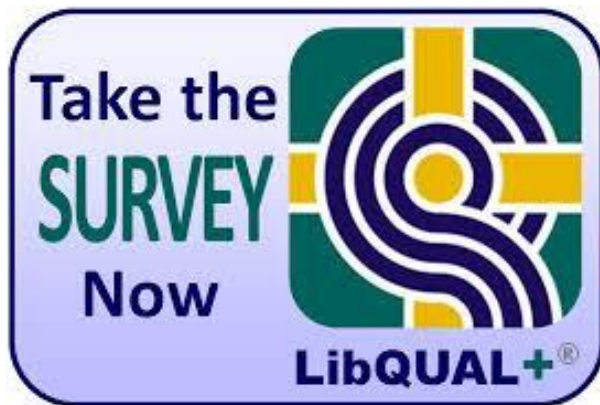
Plan, Do, Check, Act

- All objectives met (increased seating, flexible spaces, 24/7 with separate AC, shareable technology, teaching & learning spaces) ✓
- With a focus on the **Learning Commons**:
 - How do the new learning spaces affect students' academic success?
 - Do the new learning spaces support project based learning?
 - Is this how the new spaces are being used?
 - What is the impact on student and faculty engagement?
 - Did we effectively respond to the needs of our customers (students and faculty)?

Assessment methodology

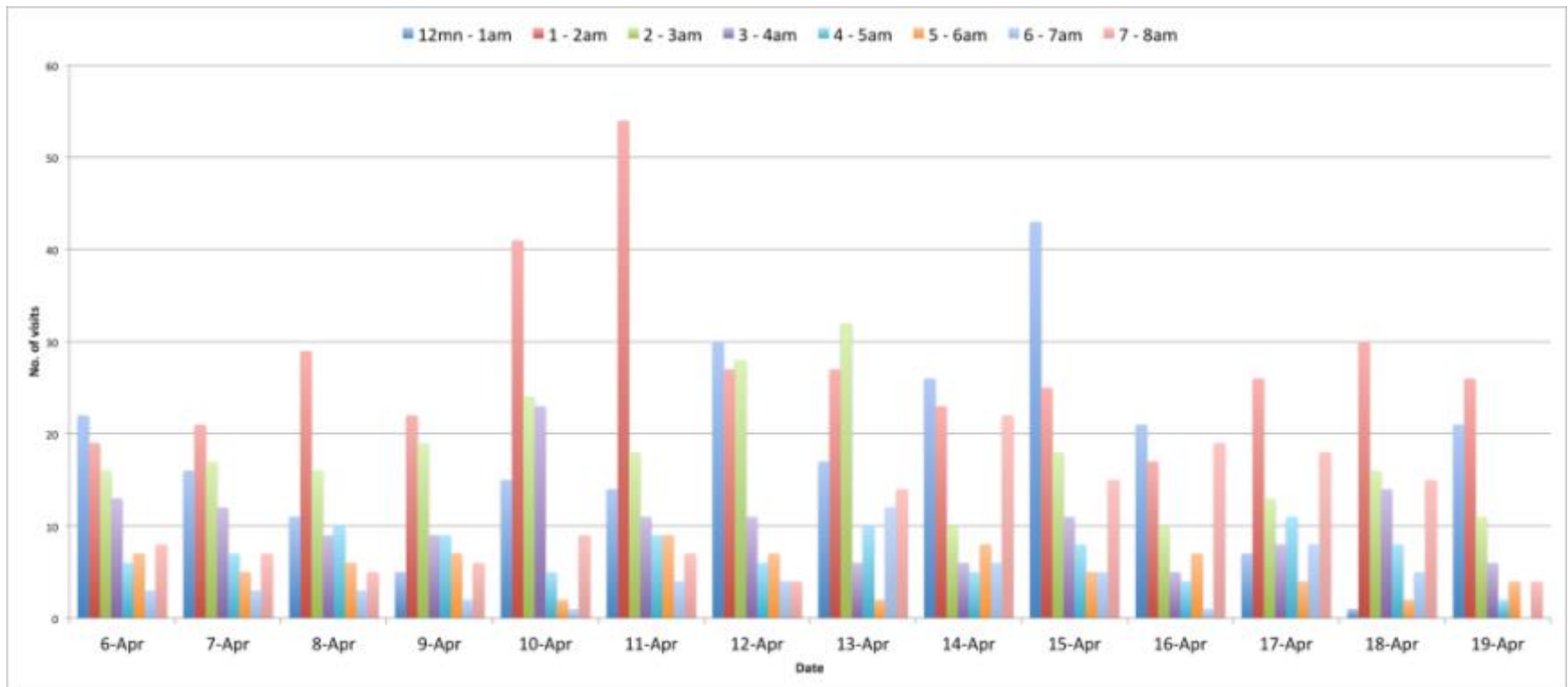
- **People Counters**
- **Location analytics**
- **Surveys**

Textual Analysis



People Counters

24/7 Learning Commons from 12:00 am to 8:00 am, April 6-19



Library Operating Hours

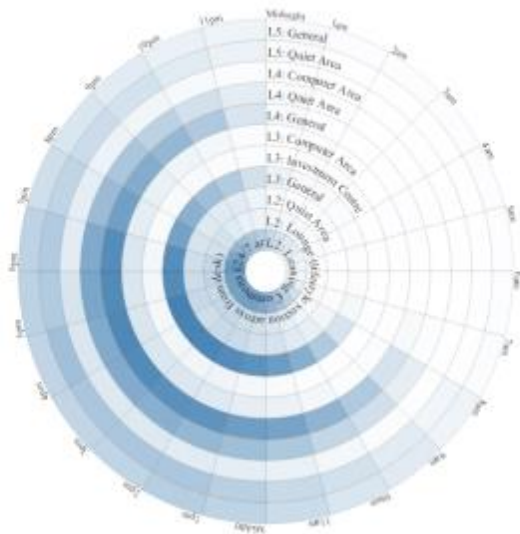
| | |
|-----------|-------------|
| Mon - Fri | 12am - 8am |
| Sat | 12am - 10am |
| Sun | 12am - 1pm |

Our Passion, Our Commitment, Your Advantage

Living Analytics Research Centre (LARC)

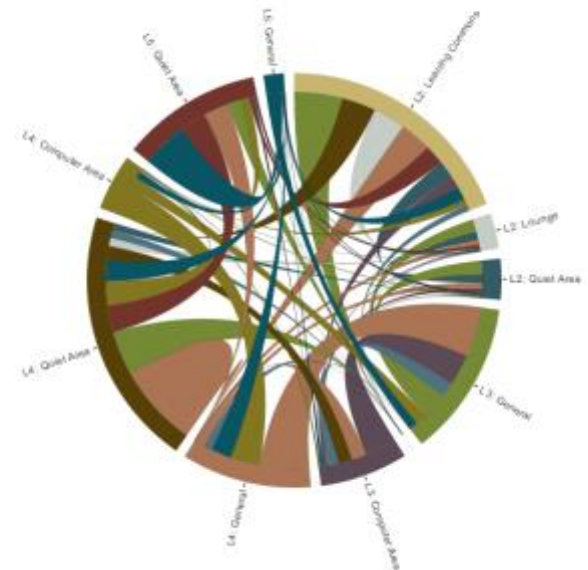
Occupancy Heat Map

Occupancy on 2014-11-19



Transition Chord Chart

Transitions between 18:00 to 19:00 hours on 2014-11-20



LibQual 2013 and 2015

A benchmarking exercise:

Library as Place

| ID | Question Text | Change | 2015 Perceived Mean | 2013 Perceived Mean |
|------|--|--------|---------------------------|---------------------------|
| LP-1 | Library space that inspires study and learning | +0.48 | 7.15 | 6.67 |
| LP-2 | Quiet space for individual activities | +0.29 | 7.01 | 6.72 |
| LP-3 | A comfortable and inviting location | +0.55 | 7.38 | 6.83 |
| LP-4 | A getaway for study, learning, or research | +0.27 | 7.29 | 7.02 |
| LP-5 | Community space for group learning and group study | +0.31 | 7.20 | 6.89 |
| Add | A place for reflection and creativity | +0.37 | 6.43 | 6.06 |
| | Library as Place Overall SMU (ARL = 6.94) | ↑ | 7.20 | 6.83 |

Academic Pursuits

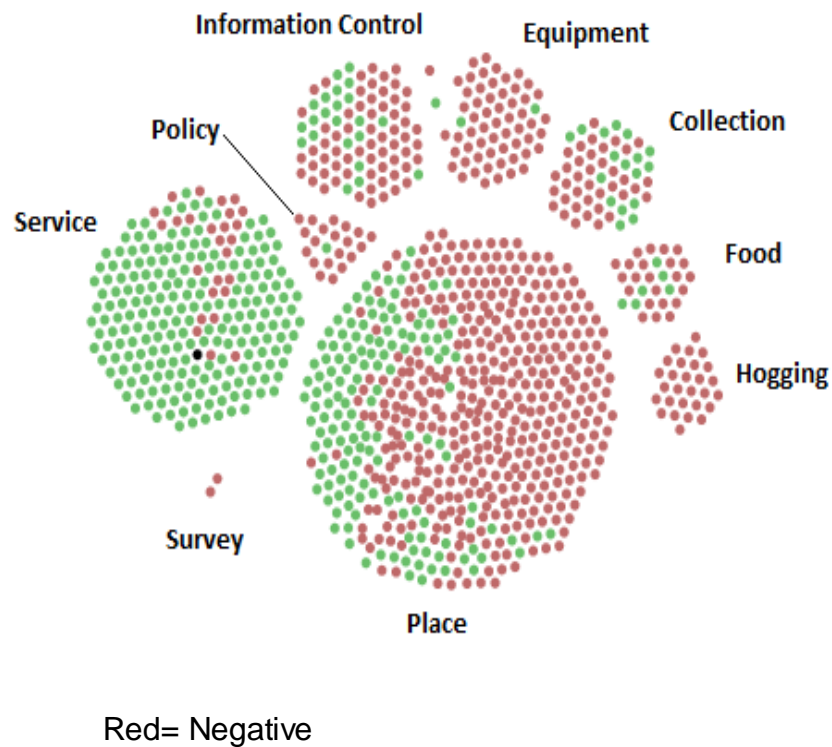
| ID | Question Text | 2015 Superiority Mean | 2013 Superiority Mean | Change |
|-----|--|-----------------------------|-----------------------------|--------|
| LP1 | Library space that inspires study and learning | -0.80 | -1.36 | +0.56 |
| LP2 | Quiet space for individual activities | -0.93 | -1.28 | +0.35 |
| LP3 | A comfortable and inviting location | -0.52 | -1.01 | +0.49 |
| LP4 | A getaway for study, learning, or research | -0.51 | -0.80 | +0.29 |
| LP5 | Community space for group learning and group study | -0.50 | -0.80 | +0.30 |

LibQual 2015 comments (space)

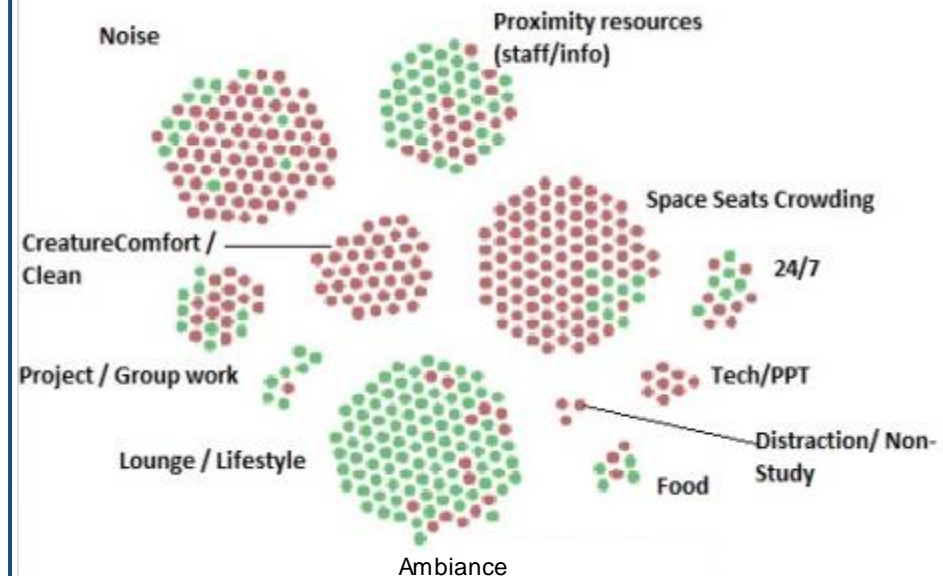
- Could be more quiet and the seat hogging is really unpleasant
- Could be quieter
- I love the windows overlooking the field
- Collaborative areas can be contained in a restricted area rather than open place to keep library quiet and conducive for studying
- I think the library is very conducive but I think it would be nicer if there were more seats
- It is just not quiet enough even in quiet area. And, sometimes I feel very cold due to the excess use of air conditioners

LibQual 2015 textual analysis

Categorization of comments (all)



Further breakdown of comments regarding space



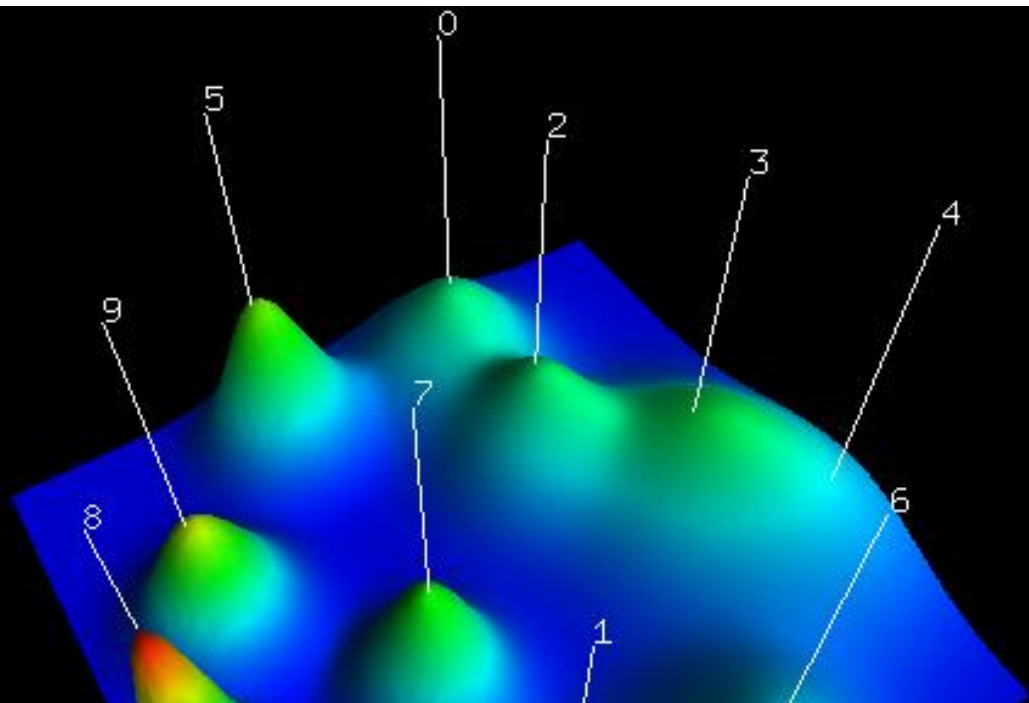
Text analytics on User Feedback

- Manual analysis is painstaking and tedious process.
- There is a need for automated techniques to analyse the feedback.
- We developed a system that employs clustering and sentiment mining techniques on the data for analysis.

Library Feedback Management System
Stage 1: Data Representation (Matrix Generation)
Choose source file [*.csv]
Choose custom stop words file [*.txt]
Save destination file [*.mat]
☐ Enable Stemming

Library Feedback Management System
Stage 2: Topic Extraction (Clustering)
Choose Clustering Method Row Model
Number of Clusters Clustering Function
☐ Show Features
Save output file as [*.10]

Text mining exercise



- Mountain visualization of clusters of comments.
- The clusters represent topics of interest
- The clusters are coherent and equally distributed.
- Collection, space, noise etc., are some topics of interest.

Cluster 1

10-way clustering: [833 of 833]

| Cluster | Size | ISim | ISdev | ESim | ESdev |
|---------|------|-------|-------|-------|-------|
| 1 | 77 | 0.050 | 0.019 | 0.013 | 0.008 |

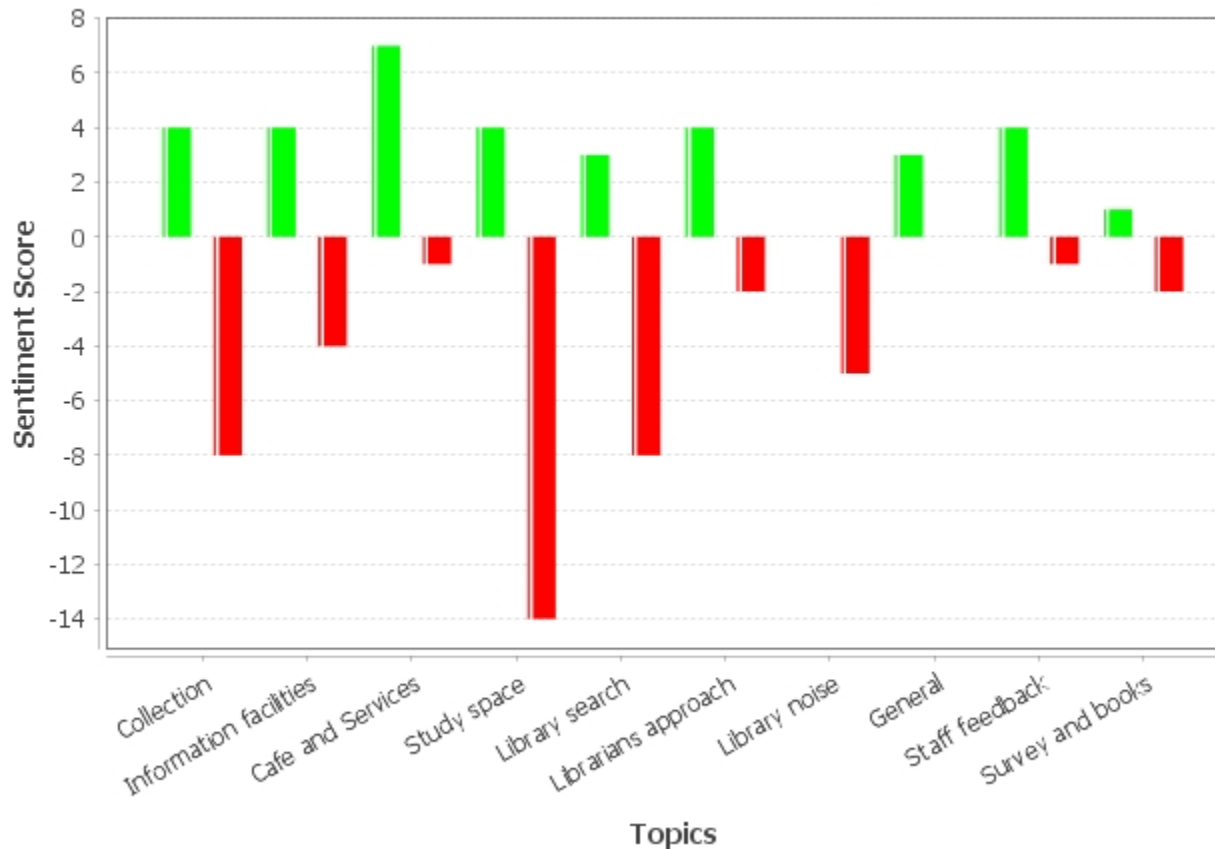
Descriptive & Discriminating Features

Cluster 1 Size: 77 ISim: 0.050 ESim: 0.013

| | | | | | | | | | | |
|-----------------|-----------|-------|--------|------|------------|------|----------|------|-----------|------|
| Descriptive: | databases | 11.9% | pretty | 8.7% | facilities | 8.0% | improved | 7.6% | resources | 4.1% |
| Discriminating: | databases | 8.6% | pretty | 7.1% | facilities | 5.7% | improved | 4.7% | staff | 2.8% |

Sentiment Analysis

Sentiment Analysis of Accountancy against Topics



- Positive and negative sentiments on the topics of interest.
- The sentiments are also categorized by the schools.

Interview / Social Sciences / **Accountancy** / Economics / Others / Law / Information Systems / Business

Focus Group results

What does 'learning success' mean to you? How would you define...

- To retain, to remember things you learnt, take with you after class ends. Sometimes you will need to study for an exam, and after the exam you will forget everything— this is not learning success.

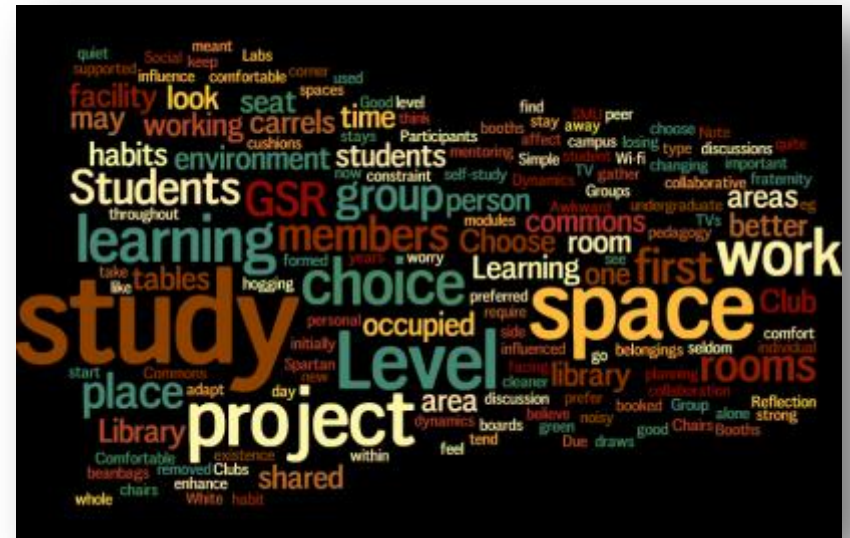


- The most effective and **successful students** have consistent habits. They **are likely to be 'seat-hoggers'** as they come in early, choose a spot that works for them and establish their routine.

Focus Group results

How do you decide where to sit?

- I use the long tables for group discussion
- I prefer to sit near friends
- I use the project rooms with LCD screens
- Proximity to librarians
- Individual carrels for quiet study
- Sit near friends to manage space
- Facing the Campus Green
- Comfortable chair, AC



Depends on the objective— if I'm studying something I don't really understand, then I will want to be near someone that I can ask questions of. But, if it's something requiring serious study, I'll have strangers all around me so that I don't get distracted.

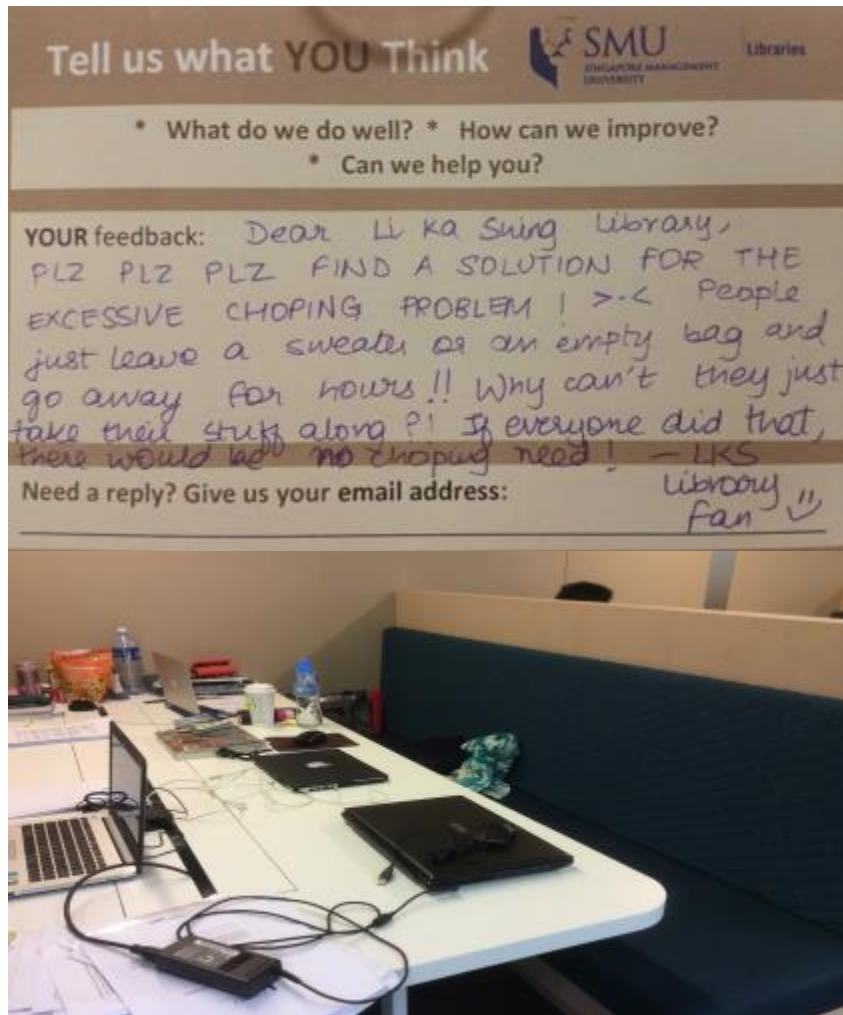
Faculty interviews

Do the spaces contribute to student learning?

- A room with moveable furniture, not bound by structure allows for a more relaxed atmosphere.
- Students can sit close together, group together... it creates a more friendly environment.
- The no food policy is a problem. Class is at noon, students tend to be multi-taskers and prefer to eat and study at the same time.



Seat-hogging as space management

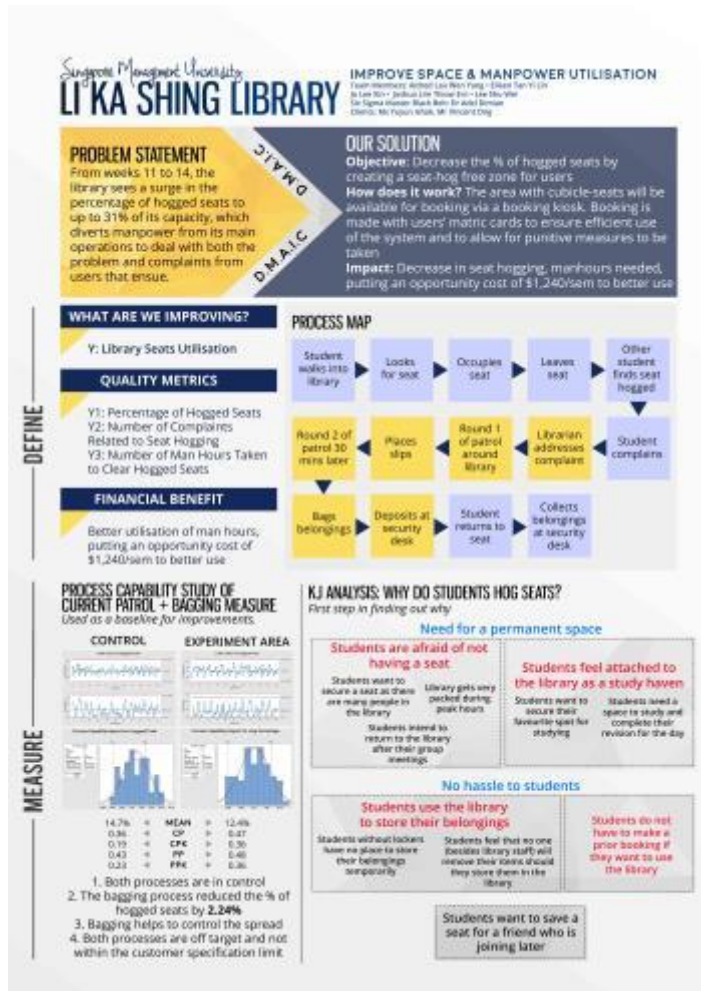


Per the focus groups, seat-hogging is a method of 'managing space', preserving a routine or habit that is attributed to the more 'successful' student...

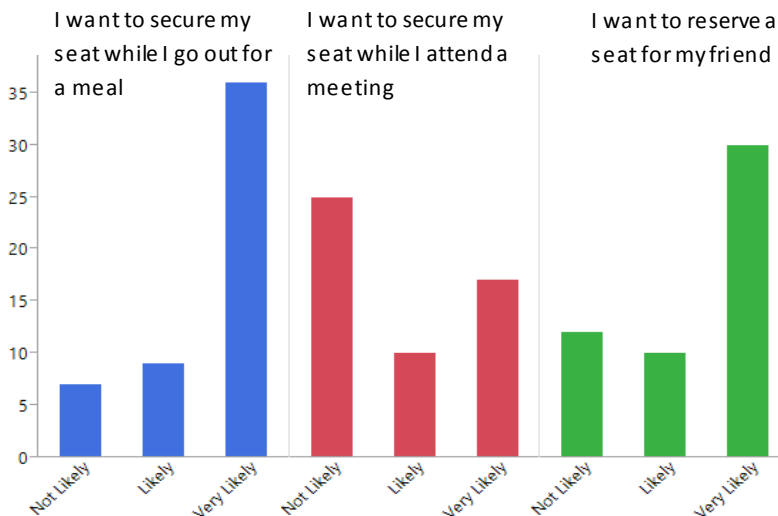
Seat-hogging (Lean Six Sigma student project)

Multi-Vari Analysis

A survey was conducted with 56 SMU students. In the survey, students were asked to indicate whether they hog seats, and to rate how well the 6 key factors (Xs) identified in our above analysis explain their motivation behind seat hogging.



How likely do the following statements explain why you seat hog? (TOP 3)



Literature review

What Matters for Students' Use of Physical Library Space?

- At Eindhoven University in the Netherlands: Space, noise, crowdedness, comfortable furniture, cleanliness

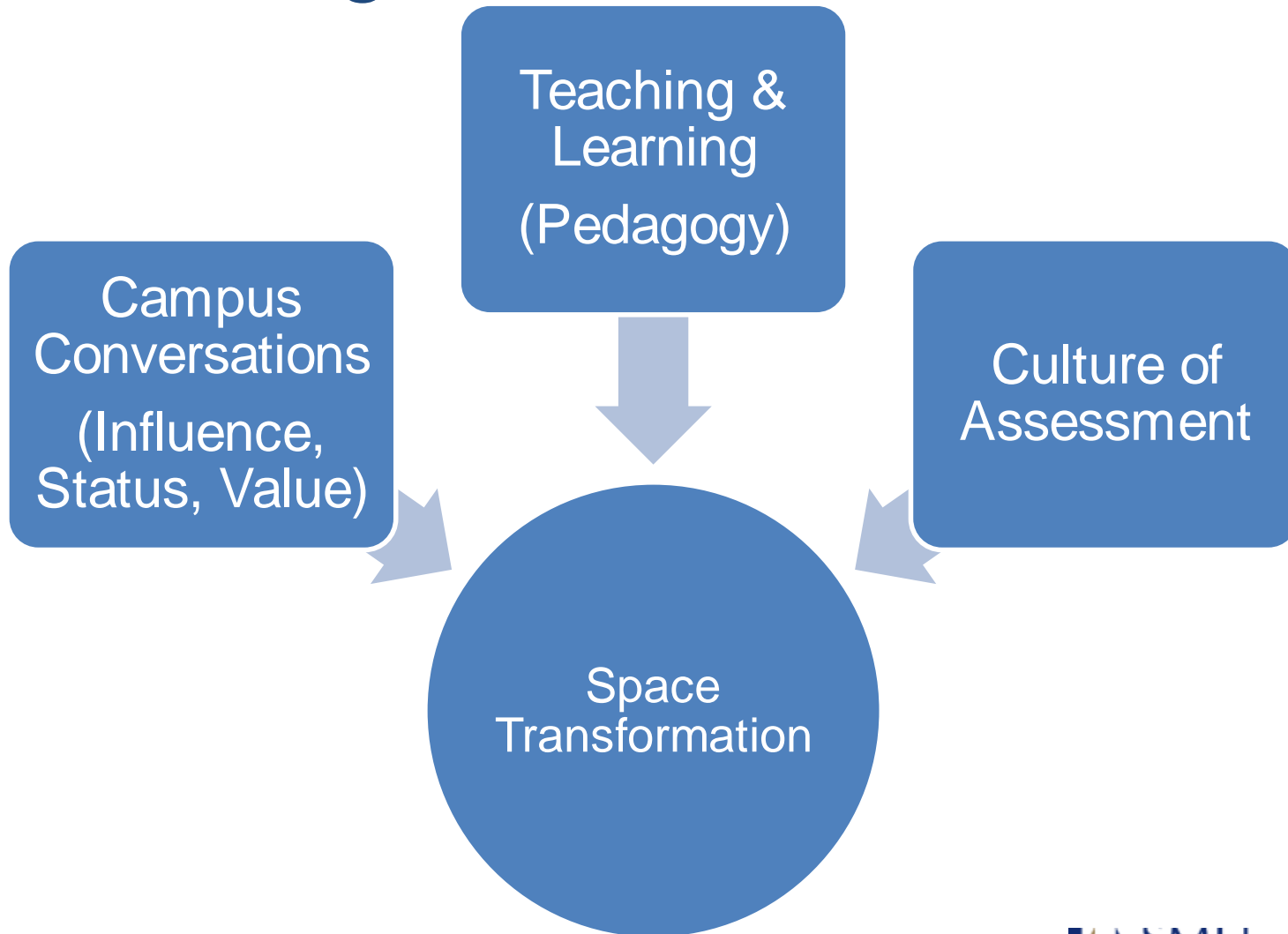
Ambience in Social Learning: Student Engagement with New Designs for Learning Spaces

- Within spaces designed for student collaboration, the solitary study continues... but the 'social' environment is important
 - Provided a taxonomy describing the observed collaborations
- "Practice of students 'reserving' scarce space with left belongings"

Strategic Development of University Library Space: Widening the Influence

- Opportunity to extend the Library's influence regarding the development of learning space campus-wide

Our Findings – Our Outcomes



Discussion



TURN! TURN! TURN! (To Everything There Is a Season)

Words from the Book of Ecclesiastes
Adaptation and Music by PETE SEEGER

Moderately slow, in 2

The musical score is written for piano and voice. It features a simple melody with a steady rhythm. The lyrics are: "To ev - 'ry - thing (turn, turn, turn) There is a sea - son (turn, turn, turn)". The score includes guitar chords: N.C., F/C, Cmaj7, Dm/C, F/C, Cmaj7, Dm/C, C, F, Em, Dm, C, F, Em.

Going Forward

- Collaboration with Centre for Teaching Excellence on Next Generation Learning Spaces event
 - *Next Generation Learning Summit Asia*
- Collaboration with School of Information Science
- Practicing Culture of Assessment
 - Learning Space assessment informing new Law Library
- **Partner with teaching faculty**
 - **To define and measure student success**

Thank You

References:

- Chan, D.L.H, Spodick, E. (2014). Space development: A Case study of HKUST Library. *New Library World*, 115, 250-262.
- Crook, C., Mitchell, G. (2012). Ambience in social learning: Student engagement with new designs for learning spaces. *Cambridge Journal of Education*, 42, 121-139.
- Given, L. M., Leckie, G. L. (2003). "Sweeping" the library: Mapping the social activity space of the public library. *Library & Information Science Research*, 25, 365-385.
- Hunley, S., Schaller, M. (2006). Assessing learning spaces. In Oblinger, D. G. (Ed.), *Learning Spaces* (pp. 13.1-13.11) An EDUCAUSE e-book.
- Matthews, G., Walton, G. (2014). Strategic development of university library space. *New Library World*, 115, p. 237-249.
- Nitecki, D. A. (2011). Space assessment as a venue for defining the academic library. *Library Quarterly*, 81, 27-59.
- Poggialia, J., Cohen, M. (2014). A low-hassle, low-cost method to survey student attitudes about library space. *Library Leadership & Management* v28, 1-8.